



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

SOME FALLACIES OF SCIENCE.*

“Le génie fait les philosophes et les poètes : le temps ne fait que les savants.”—FONTENELLE.

SIR LYON PLAYFAIR read to the assembled members of the British Association, when they met at Aberdeen, in the early autumn of last year, a discourse both eloquent and well suited to excite the enthusiasm of his audience, already disposed by taste and bias to salute its propositions as gospel. That there were truths in it, no one would dispute ; that it was exclusively composed of truth is not so evident to minds unswayed by scientific prejudice. It, at all events, was a curious and complete *résumé* of the scientific mind, of its views, conclusions, and expectations, and is therefore interesting in itself, if not as overwhelming in its persuasions to the dispassionate reader as it was to the sympathetic and selected audience to which it was addressed. Scientific persons usually never address themselves to any other audience than one thus paneled and prepared. They like to see a crowd of their own disciples in their halls ere they let fall their pearls of wisdom. The novelist does not demand that he shall be only read by novelists. The painter does not think that none but painters can be permitted to judge a painting. The sculptor does not ask that every critic of his work shall be a Phidias. The historian does not insist that none but a Tacitus shall pass judgment on him. But the scientist does exact that no opinion shall be formed of him and of his works except by his own brethren, and sweeps aside all independent criticism on a principle which, if carried out into other matters, would forbid John Ruskin ever to give an opinion on painting, and would prohibit Francisque Sarey from making any critical observations on actors. Sir Lyon Playfair's address satisfied his audience, because that audience was composed of persons already willing to be satisfied ; but if we can imagine

* Suggested by an Address to the British Association, at Aberdeen, 1885

some listener altogether without such bias, if we can suppose some one amongst the auditors with mind altogether unprejudiced, such an one might without effort have found many weak places in this fine discourse, and would have been sorely tempted to cry "Question, Question!" at more than one point in it.

Taken as a whole, the address was an admirable piece of special pleading in favor of science, and of her superior claims upon the resources of all states and the minds of all men. But special pleading has always this disadvantage: that it seeks to prove too much; and the special pleading of the President of the Aberdeen meeting is not free from this defect. We know, of course, that in his position, he could hardly say less; that with his antecedents and reputation, he would not have wished to say less; but those who are removed from the spell of his eloquence, and peruse his arguments in the serene air of their studies, may be pardoned if they be more critical than an audience of fellow-workers, and mutual admirers, if they lay down the pages of his admirably worded praises of science, and ask themselves dispassionately: How much of this is true?

The main object of the discourse was to prove that science is the great benefactress of the world. But is it proved? To the mind of the scientist the doubt will seem as impious as the doubt of the sceptic always does seem to the true believer. Yet it is a doubt which must be entertained by those who are not led away by that bigotry of science, which has so much and so grievously in common with the bigotry of religions.

Let us see what are the statements which the President of the British Association brings forward in support of the position which he gives to Science as the goddess and the benefactress of mankind. First, to do this he casts down the Humanities beneath his feet, as the professors of science always do; and, as an illustration of the uselessness which he assigns to them, he asserts that were a Chrysoloras to teach Greek in the Italian universities he would not hasten perceptibly the onward march of Italy.

What does this mean? It is a statement, but the statement of an opinion, not of a fact.

What is comprised under the vague term "the onward march of Italy"? Does it mean the return of Italy to her pristine excellence in all arts, her love of learning, her grace of living? or does it mean the effort of Italy to aggrandize herself at all cost,

and to engage in foreign and colonial wars whilst her cities groan under taxation and her peasantry perish of pellagra? In the one case the teaching of Chrysoloras would be of infinite value; in the other it would, no doubt, not harmonize with the vulgar greeds and dangerous ambitions of the hour. If the "onward march of Italy" means that she is to kneel to a steam-mill, submit to a standing army, wait slavishly on Germany, and scramble for the sands of Africa, the teachings of Chrysoloras would be wasted; but if it mean that she is to husband her strength, cultivate her fertile fields, merit her gift of beauty, and hold a high place in the true civilization of the world, then I beg leave to submit that Chrysoloras, or what his name is here taken to symbolize, would do more for her than any other teacher she could have. Could the classic knowledge and all which is begotten by it of serenity, grace, trained eloquence, and dispassionate meditation, be diffused once more through the mind of Italian youth it would, I think, produce a generation which would not madly rush to Tripoli, nor accept the veiled tyrannies of State-appointed Prefects.

The scientists take for granted that the education of the schools creates intelligence: very often it does no such thing. It creates a superficial appearance of knowledge, indeed; but knowledge is like food, unless it be thoroughly assimilated when absorbed, and thoroughly digested, it can give no nourishment; it lies useless, a heavy and unleavened mass. It is the fashion in these times to despise husbandmen and husbandry, but it is much to be questioned if the city cad, with his smattering of education, his dabbling in politics, his crude, conceited opinions upon matters on which he is absolutely ignorant, be not a far more ignorant, as he is undoubtedly a far more useless person, than the peasant, who may never have opened a book or heard of arithmetic, but thoroughly understands the soil he works on, the signs of the weather, the rearing of plants and of animals, and the fruits of the earth which he cultivates. The man of genius may be many-sided; nature has given him the power to be so; but the mass of men do not and cannot obtain this Protean power; to do one thing well is the utmost that the vast majority can well hope to do; many never do so much, nor a quarter so much. To this vast majority science would say: you may be as indifferent weavers, plowmen, carpenters, shop-

men, what you will, but you must know where the spermatic nerves are situated in the ichneumon, and you must describe the difference of microzoaires and miraphytes, and you must understand the solidification of nitric acid. Nor is the temper which science and its teachers seem likely thus to give the human race, one of fair promise. How much have not the men of science added to the popular dread of cholera, which in its manifestation of cowardice and selfishness has so grossly disgraced the Continent of Europe in the past and present year? Their real or imaginary creation, the microbe, has invested cholera with a fanciful horror so new and hideous in the popular mind, that popular terror of it grows ungovernable, and will, in great likelihood, revolt beyond all restraint, municipal or imperial, whenever the disease should again revisit Europe with violence. Again, how many nervous illnesses, how many imaginary diseases, have sprung into existence since science, popularized, attracted the attention of mankind to the mechanism of its own construction? It is a familiar truth that a little knowledge is a dangerous thing, and of no knowledge is it truer than of physiological knowledge. It has been said, that every one at forty should be a fool or a physician, and so far as knowing what to eat, drink, and avoid, every one should be so; but, unhappily, those who become the latter, *i. e.*, those who become capable of controlling their own constitutional ailments and weaknesses, are apt to contract in their study of themselves an overweening tendency to think about themselves. The generalization of physiology amongst the masses means the generalization of this form of egotism. A child who was told and shown something of anatomy, said, naïvely: "Oh, dear me! now that I know how I am made, I shall be always thinking that I am coming to pieces." In a less innocent way the effect of the popularization of physiology is the same on the multitude as on this child: it increases valetudinarianism, nervousness, and the diseases which spring from morbid fears and morbid desires. Those nervous illnesses which are the peculiar privilege of modern times, are largely due to the exaggerated attention to themselves which science has taught to humankind. The Greek and the Latin said: "Let us eat and drink and enjoy, for to-morrow we die." Modern science says: "Let us concentrate our whole mind on ourselves and our body, although our mind like our body is only a conglomeration of gases which will go out in the dark." The classic in-

junction and conclusion are the more healthy and the more logical, and produced a race of men more manly, more vigorous, and more consistent with themselves.

To return to the assertions contained in this address which we now consider : in the address it is stated as a fact which all must rejoice over, that in Boston one shoe factory, by its machines, does the work of 30,000 shoemakers in Paris, who have still to go through the weary drudgery of hand-labor. Now, why is the "drudgery" of sewing a shoe in any way more "weary" than the drudgery of oiling, feeding, and attending to a machine? Machine-work is on the contrary of all work the most mechanical, the most absolute, drudgery. There is no kind of proof that, because the work of 30,000 shoemakers is done by a machine, mankind at large is any the happier for this. We know that all machine-made work is inferior to hand-work ; inferior in durability, in excellence of quality, and in its inevitable lack of that kind of individuality and originality which hand-work takes from the fingers which form it. In the "Seven Lamps of Architecture," there is an admirable exposition of this immeasurable difference in quality which characterizes hand-labor and machine-made work ; of the stone cut by steam and the stone cut by hand. Let us only consider what ruin to the arts of India has been brought about by the introduction of machinery. The exquisite beauty of Oriental work is due to the individuality which is put into it ; the worker, sitting beneath his grove of date-trees, puts original feeling, individual character, into each line graven on the metal, each thread woven in the woof, each turn given to the ivory. Machines destroy all this. They make machines of the men who tend them, and give a soulless and hateful monotony to everything which they produce.

Despite the vaunt of Sir Lyon Playfair, the cobbler who sits on the village green, doing sound, if simple work, honestly, giving a personality to the shoe he labors on, and knowing on what foot it will be worn and whether it will go, is a man, and may be in his own humble way a good artist ; but the attendant who feeds the shoe-machine with oil, or takes from it its thousands of machine-cut leathers, is no better than a machine himself ; so far from being "set free," he is in servitude. The cobbler on the village green knows far more of freedom than he. This curious statement that hand-work, with its scope for originality and individual interest is slavery, whilst the work of factories, mechanical, monoto-

nous, and done in ugly chambers and unwholesome air, is liberty, is surely the oddest delusion with which the fanatical and biased mind of science ever delighted itself. Who can compare the freedom of the native child in a village of Benares, shaping an ebony or cocoanut toy under the palm-fronds of his home, with the green paroquets swinging, and the monkies chattering in the sunlit bamboos above his head, with the servitude of the poor little sickly and weary Hindoos, thronging in patient flocks the noisome factory-chambers of Bombay ?

The president of the British Association seems to expect that all men whom machines "set free" from the drudgery of their daily calling, will all at once do something infinitely better than they did before they were free. But this seems to me a very rash conclusion. If the 30,000 shoemakers are all "set free" in Paris, by the introduction of the Boston machine, is it so certain that their freedom will produce anything better than a good pair of shoes ? What greater freedom is there in attending to the machine if they select to do that, or in entering into another trade ?—one thing or the other no doubt they must do, if they want to earn their bread ? What have they gained by being "set free, and passed from one kind of occupation to another ?" I fail to see what they have gained. Have the public gained ? It is open to doubt. Where will be the gain to their contemporaries, or to themselves, if these 30,000 shoemakers "set free" become telegraph clerks or bookkeepers ? Something they must become, unless they are to live as paupers or mendicants. Where is their freedom ? "Set free" is a seductive and resonant expression, but analyzed it simply means nothing in this instance. And, before quitting this subject, let me also remark that if Sir Lyon Playfair knew as much about shoes as he does about science, he would know that a machine to make shoes is a most unwelcome invention, because every shoe or boot which is not made *expressly* for the foot which is to wear it, is an ill-made shoe, and will cause suffering and deformity to the unwise wearer. The vast mass of the population of every "civilized" nation has deformed feet, because they buy and wear ready-made shoes, thrusting their extremities into houses of leather never designed for them. Machines which make shoes by the thousand can only increase this evil. As it is, we never see by any chance any one walk well, unless it be some one whose shoes are made with great care and skill, ad-

justed to his feet alone, or peasants who have never shod their feet at all and step out, with the bare sole set firmly and lightly on their mother earth. Science can, no doubt, turn out millions of cheap shoes, all exactly alike, but nature will not consent to adopt such monotony of contour in the feet which will wear them.

The President of the British Association speaks of science always as of a Demeter, with blessings in her hands, creating the fullness of the fields and the joys of mankind. But if we resist the charm of his eloquence and look more closely at the tissue of it, we shall not be so content to accept his declarations. What does the expression mean—to benefit mankind? I conclude that it must mean to increase its happiness and its health; all the wisdom of the ages will avail it nothing if it pule in discontent and fret in nervous sickness. Now does science increase the sum of human happiness? It is very doubtful.

Let us take the electric telegraph as an instance of the benevolence of science. Can it be said to make men happier? I think not. Politicians and diplomatists agree that the hasty judgments and conflicting orders which it favors and renders possible, double the chances of internecine quarrels, and stimulate to irritation and haste, which banish statesmanship. In business the same defects are due to it, and many a rash speculation or unconsidered reply, an acceptance or refusal, forced on men without there being time for any mature consideration, have led to disastrous engagements and as disastrous failures. Even in private life its conveniences may have a certain value, but the many troubles and excitements brought by it are incalculable. Niobe hearing of the death of her children by a printed line on a yellow sheet of paper, has her grief robbed of all dignity and privacy, and intensified by a shock which deals her its fatal blow without any preparation of the mind to receive it. The telegraph, bridging space, may be, and is, no doubt, a wonderful invention, but that it has contributed to the happiness or wisdom of humanity is not so certain. Men cannot do without it now, no doubt; neither can they do without alcohol. The telegraph, like nearly all the inventions of the modern age, tends to shorten time but to harass it, to make it possible to do much more in an hour, a day, a year, than was done of old, but to make it impossible to do any of this without agitation, brain-pressure, and hurry. It has impaired language and manners, it has vulgarized death, and it has increased the great evils of im-

mature choice and hasty action ; these drawbacks weighed against its uses must at the time prevent us from regarding its invention as an unmixed blessing.

Sir Lyon Playfair, proceeding in his enumeration of the benefits which science confers on man, turns to that most familiar matter, air, and that equally familiar element, water. He speaks with pride of all which science has discovered concerning their component parts, and their uses and effects upon the world. His pride no doubt may be justified in much, but he passes over one great fact in connection with air and water, *i. e.*, that both have been polluted through the inventions of science in a degree which may well be held to outweigh the value of the discoveries of science.

Were we to awake an Athenian of the time of Phidias from his mausoleum, and take him with eyes to see and ears to hear and nostrils to smell, into Blackpool or Belfast, even into Zurich or Munich, he would ask us, in stupefaction, under what curse of the gods had the earth fallen that mankind should dwell in such hideous clamor, such sooty darkness, such foul stenches, such defiled and imprisoned air. He would survey the begrimed toilers of the mills and looms, the pallid women, the stunted offspring, the long lines of hideous houses, the soil ankle-deep with cinder-dust, the skies a pall of lurid smoke, the country scorched and blackened and accursed ; he would survey all this, I say, asking by what malediction of heaven and what madness of mankind the sweetest and chief joys of nature had been ruined and forgotten thus ? He would behold the dwarfed trees dying under the fume of poisonous gases, the clear river changed to a slimy, crawling, stinking, putrid flood of filth ; the buoyant air, once sweet as the scent of cowslips or clover-grass, made by the greed of man into a sickly, noxious, loathsome thing, loaded with the stench of chemicals and the vapors of engine-belched steam. He would stand amidst this hell of discordant sounds between these walls of blackened brick, under this sky of heavy-hanging soot ; and he would remember the world as it was ; and if at his ears any prated of science, he would smile in their faces, and say : " If these be the fruits of Science let me rather dwell with the forest beast and the untaught barbarian."

Yes ; no doubt science can study air in her spectrum, and analyze water in her retorts ; she can tell why the green tree dies in

the evil gas, and the rose will not bloom where the blast-furnace roars ; she can tell you the why and the wherefore, and can give you a learned treatise on the calcined dust which chokes up your lungs ; but she cannot make the green tree and the wild rose live in the hell she has created for men, and she cannot make the skies she has blackened lighter, nor the rivers she has poisoned run clean. Even we who dwell where the air is pure, and the southern sun lights the smiling waves and the vine-clad hills, even we cannot tell how beautiful was the earth in the days of the Greek anthologists ; when the silvery blue of wood-smoke alone rose from the hearth fires ; when the flame of the vegetable oils alone illumined the fragrant night ; when the white sails alone skimmed the violet seas ; when the hand alone threw the shuttle and wove the web ; and when the vast virgin forests filled the unpolluted air with their odorous breath. Even we cannot tell what the radiance of the atmosphere, of the horizons, of the sunrise and sunset, were when the world was young. Our loss is terrible and hopeless, like the loss of all youth. It may be useless to lament it, but in God's name let us not be such purblind fools that we call our loss our gain.

Repose, leisure, silence, peace, and sleep are all menaced and scattered by the inventions of the last and present century ; they are the greatest though the simplest blessings that mankind has ever had ; their banishment may be welcomed by men greedy only of gold ; but, meantime, the mad-houses are crowded, spinal and cerebral diseases are in alarming increase, heart-disease in divers shapes is the same, and all the various forms of bodily and mental paralysis multiply and crown the triumphs of the age.

Let us turn for a moment to the consideration of politics and of war as these are affected by the influence of science. Sir Lyon Playfair speaks much of the superior wisdom, the superior education, the superior devotion to science, of Germany as contrasted with those of any other nation ; he lauds to the skies her enormous grants to laboratories and professors of physiology and chemistry and "original research" (called by the vulgar vivisection) ; but the only result of all this expenditure and instruction is a military despotism so colossal that, whilst it overawes and paralyzes both German liberty and European peace, it yet may fall over from its own weight any day, like the giant of clay which it resembles. Are we not then justified in objecting to such praises of

Germany, and refusing to render such homage to her? "By your fruits ye shall be judged," is a just saying; and the fruits of Germany, in the concert of Europe and the sum of political life, are dissension, apprehension, absolutism, and the sacrifice of all other nations to the pressure of the military Juggernaut which rolls before her; whilst in her own national life the outcome of the sanguinary lessons given by the government is little better than the barbarism of the middle ages without its redeeming law of chivalry. The incessant and senseless duels which maim and disfigure German youth are a disgrace to civilization, and a duelist may fire three times at an adversary who *never returns the fire* and, killing him at the last, will only be punished by a slight imprisonment, whilst he will be admired and deified by his comrades.* Such barbarous brutality, such insensibility to generous feeling, such universal resort to the arbitration of every trifling dispute by the pistol or the saber, is the chief characteristic of the nation in which science rules supreme! Conscription, that curse of nations, is forced on all weaklier powers by the enormous armed forces of Germany; art suffers, trades suffer, families suffer; and we are called on by a "scientific" mind to admire as a model the nation which is the cause of this suffering, as we are bidden to admire as models also her mutilated and bandaged students, and her blue-spectacled and blear-eyed school-children!

Sir Lyon Playfair traces the defeat of France in 1870 to the inferiority of her university teaching, and gives the opinion of the Institut de France as his authority. It seems a singularly illogical and unphilosophical decision for such an august body to have given forth publicly. The causes of the defeat of France stretch farther back and have deeper roots than can be accounted for by the omission of the state to create more professors and laboratories. The whole teachings of history show that all states after reaching their perihelion, gradually decline and sink into an inferior place amongst the nations. The day of France, as of England, is already past its noon. Neither will ever be what they have been. Neither will ever again give law to Europe, as they gave it once. But so many causes, some near, some remote, have all contributed to bring about that decline which is as inevitable to nations as to individuals, that it is surely most unphilosophic to contend that such decay could have been averted

* See "Times," of September 19, 1885: account of duel in Munich.

by the creation of some hundred or thousand more professors of natural or other science. It may be natural for such a professor to consider such professorships the one universal panacea for all ills; but it is not an opinion in which those who know France best and most intimately would be inclined to coincide. They would conclude that, on the contrary, she has too many professors already; that the grace, and wit, and courtesy, and wisdom, and chivalry have gone out of her since she was reeled from the desks of the school-master, the physiologist, and the notary, and the whole system of French colleges is calculated to emasculate and injure the character of the school-boy before he goes up for his baccalaureate.

The German invasion of France was supported by all which science could do, yet most military judges are agreed that unless the carelessness of her foe had afforded her a fortnight's preparation, she would have been hopelessly beaten on her own territory; whilst, look at the campaign how we may, it cannot stand a moment's comparison with the Eastern marches of Alexander, or the conquests of Roman generals. With none of the resources of modern warfare, these great conquerors carried fire and sword through the whole of the regions known to them, from the sands of Africa to the ice-plains of the Baltic. What is there in modern war, which can compare with the campaigns of Hannibal, the amazing victories of Julius Cæsar, the deeds of the young Pompeies, the story of every Legion? In the course of last year, with every aid which modern science can invent, and assisted by every facility which modern modes of transit lend to the transport of multitudes, an army was dispatched from Great Britain with orders to reach a city on the Nile: the errand was too difficult to be accomplished; the generals returned with their mission unfulfilled; the country received them with honor. This is the height to which the assistance of modern science has brought the would-be Cæsars of the age.

What child's play would the expedition to Khartoum have seemed to Scipio Africanus or to Lucius Sylla! Yet all the "resources of science" did not save the modern expedition from failure, and, in the face of Europe and Asia, it retreated in ignominy before the barbaric and untrained followers of a half-mad prophet after an enormous expenditure of stores and treasure, and a perfectly useless waste of human life!

War has been almost incessant since the empire of science, but it has been characterized neither by magnanimity nor true triumph. Europe, armed to the teeth, is like a muzzled pack of blood-hounds ; every nation lives in terror of the others ; to such a pass has scientific warfare brought the world. The multiplication of engines of destruction is one of the chief occupations and boasts of a scientific age, and it can claim a melancholy pre-eminence in the discovery of the means to inflict the most agonizing of all wounds through the medium of conical bullets and shells of nitro-glycerine. To have added unspeakable horror to death, and to have placed the power of secret and wholesale assassination in the hands of ignorant and envious men, is one of the benefits which this Egeria has brought to her eager pupil. And when her worshipers laud her to the skies, as does the president of the Aberdeen meeting, their silence on this side of her teaching is at once significant and ominous.

Sir Lyon Playfair is obviously afraid that the Humanities will always obtain, in England at least, a larger place in public teaching and in public subsidies than pure science will be able to do. I wish his fear may be justified. My own fears are on the other side. Science offers prizes to the prurient curiosities and the nascent cruelties of youth with which literature can never compete. To study all the mysteries of sex in anatomy and to indulge the power of Nero in little when watching the agonies of a scientifically tortured or poisoned dog, are enjoyments appealing to instincts in the frame of the school-boy, with which not even the most indecent passage in his Greek or Latin authors can ever pretend to measure attraction. The professors of science need have no fear as to the potency of the charm which their curriculum will exercise over the juvenile mind. Teaching which offers at once the penetration into corporeal secrets and the power of torture over animals, possesses a fascination for the minds of youth which it will never lose, because its appeals are addressed to those coarsest and cruelest impulses which are strongest of all in the child and in the adolescent.

What science is preparing for the future of man, in thus putting the scalpel and the lens into the hands of children, is a darker and wider question. One thing is certain, that in the future, as in the streets and temples of ancient Rome, there will be no alter to Pity.

The acknowledged doctrine of the professors of "research," that all knowledge is valuable because it is, or appears to be knowledge, and that all ways and methods of obtaining it are justified and sanctified, bears so curious a likeness to the self-worship of the Papal dominion and of the Spanish Inquisition that we see, with a sense of despair, that bigotry and despotism in some form or another are fated to reappear so long as human life shall last.

It is significant of the political immorality and readiness to tyrannize over others in the pursuit of their aims, which characterize the scientific classes, that they are willing to admire and support any government which is willing in return to endow their scholarships and erect their laboratories. They are inclined to surrender all political liberty, if by so doing they can obtain a ruler who will build them a number of new colleges, with every new instrument ready to their hands for animal torture and physiological or chemical experiment.

A Lorenzo di Medici, devoted exclusively to the sciences instead of to the arts, would be their ideal sovereign. Public liberties might perish under him as they should; he would give science her free scope, her desired endowments, her million living victims; he would be even too enlightened to refuse her human subjects for the physiological laboratory.

This curious willingness of the pursuers of science to join hands with tyranny, so long as tyranny helps themselves, is the darkest menace of the world's future. In time to come it may assume dimensions and aspects which are undreamed of now. The demand of biologists and chemists to be provided for out of the funds of the state, is a demand which has never been made by literature or art, and would not be tolerated from them. The exorbitant sums insisted on for the establishment of laboratories and professorships, rob science of that character of disinterested devotion which alone makes it worthy of esteem. "Give me a thousand or fifteen hundred a year," says the physiologist to the State; "give me money-grants also for experiments which I may spend at my good option and for which I need return no account, and leave me to cut up dogs and cats and horses at leisure. In return I will give you some new facts about internal hydrocephalus or the length of time a new poison takes to kill a guinea-pig." The agreement may, or may not be worth the State's entering into

with the physiologist, but in any case the physiologist cannot deny that he makes a good income out of his science, and cannot pretend to any disinterested or philanthropic selection of it. The moment that any man accepts a salary for intellectual work, he must submit to resign all claim to purely intellectual devotion to it. The claims of scientists to be paid and provided for out of national funds has many equivocal aspects, and will have many unwholesome results; whilst the rapacity and insistence with which they are put forward are as unbecoming as they are undisguised. The high priests of modern science are not likely to shed tears like the Greek philosopher Isocrates because they are compelled to take money. On the contrary, they clamor loudly for their maintenance by their nation, with a cupidity which has happily never disgraced either literature or art.

As modern socialism aspires to make the world into one vast allotment-ground, with every man's half-acre meted out to him on which to build his hut and hive his store, so science would change it into one vast class-room and laboratory, wherein all humanity (paying very large fees) should sit at the feet of its professors, whom it would clothe with purple and fine linen, and whom it would never presume to oppose or to contradict.

The world will gain nothing by delivering itself, as it is gradually doing, from the bondage of the various churches and their priesthods, if in their stead it puts its neck under the yoke of a despotism, more intellectual perhaps, but as bigoted, as arrogant, and as cruel. That this danger lies before it from its submission to the demands of science, no dispassionate student of humanity can doubt.

OUIDA.